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(12) United States Patent Wiley et al.

(10) Patent No.:

US 6,284,236 B1

(45) **Date of Patent:**

Sep. 4, 2001

(54) CYTOKINE THAT INDUCES APOPTOSIS

Inventors: Steven R. Wiley; Raymond G. Goodwin, both of Seattle, WA (US)

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Subject to any disclaimer, the term of this (*) Notice:

patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/320,424

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Related U.S. Application Data

- Continuation-in-part of application No. 09/190,046, filed on Nov. 10, 1998, now abandoned, which is a continuation-in-part of application No. 09/048,641, filed on Mar. 26, 1998, now abandoned, which is a continuation-in-part of applica-tion No. 08/670,354, filed on Jun. 25, 1996, now Pat. No. 5,763,223, which is a continuation-in-part of application No. 08/548,368, filed on Nov. 1, 1995, now abandoned which is a continuation-in-part of application No. 08/496,632, filed on Jun. 29, 1995, now abandoned.
- Int. Cl.⁷ A61K 38/19; C07K 14/52; C12N 5/10; C12N 15/19; C12N 15/63
- 514/12; 530/351; 435/69.5; 435/320.1; 435/325; 435/471; 435/71.1; 435/71.2; 435/252.3; 536/23.1; 536/23.5
- (58) Field of Search 530/350, 351; 574/2, 8, 12; 435/69.5, 325, 252.3, 254.11, 471, 71.1, 71.2, 320.1; 536/23.1, 23.5; 424/85.1

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(57)**ABSTRACT**

A novel cytokine designated TRAIL induces apoptosis of certain target cells, including cancer cells and virally infected cells. Isolated DNA sequences encoding TRAIL are disclosed, along with expression vectors and transformed host cells useful in producing TRAIL polypeptides. Antibodies that specifically bind TRAIL are provided as well.

59 Claims, 4 Drawing Sheets